#1 CONTACT INFORMATION:

<table>
<thead>
<tr>
<th>Procedure Title</th>
<th>General use of Hydrate Reducing Agents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Procedure Author</td>
<td>Matt Zielinski</td>
</tr>
<tr>
<td>Date of Creation/Revision</td>
<td>October 25th, 2013</td>
</tr>
<tr>
<td>Name of Responsible Person</td>
<td>Dr. Marc Adler</td>
</tr>
<tr>
<td>Location of Procedure</td>
<td>LAT 3360</td>
</tr>
<tr>
<td>Approval Signature</td>
<td></td>
</tr>
</tbody>
</table>

#2 THIS STANDARD OPERATING PROCEDURE (SOP) IS FOR A:

- [ ] Specific laboratory procedure or experiment
- [X] Generic laboratory procedure that covers several chemicals
- [ ] Generic use of specific chemical or class of chemicals with similar hazards

#3 PROCESS OR EXPERIMENT DESCRIPTION

This SOP looks at the use of hydrate reducing agents and the proper methods to weigh, add, and dispose of them before and after reactions.

Frequency:

- [X] other: Whenever this reagent is needed

Duration per Expt:

- _______ minutes; or _____ hours
  
  * Duration varies
#4 SAFETY LITERATURE REVIEW & HAZARD SUMMARY

* Hydrogen peroxide will react with water; be sure to use these reagents in a dry, well ventilated area.

#5 STORAGE REQUIREMENTS

* Hydrogen reducing agents must be stored in a dessicator.

#6 STEP-BY-STEP OPERATING PROCEDURE

1. Don personal protective equipment.
   - appropriate street clothing (long pants, close-toed shoes)
   - gloves; indicate type: Nitrile
   - safety goggles ☐ safety glasses ☐ face shield
   - lab coats ☐ other: ____________________________

2. Check the location and accessibility of the safety equipment that serves your lab:

<table>
<thead>
<tr>
<th>ITEM</th>
<th>STATUS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Laboratory Fume Hood/Glove Box or other Ventilation Control</td>
<td>Location: Lat 336</td>
</tr>
<tr>
<td>Eyewash/Safety Shower</td>
<td>Location: Lat 336</td>
</tr>
</tbody>
</table>

For assistance with this form contact NIU Environmental Health and Safety, 815-753-0404.
3. For solids weigh the reagent in a glove box under an inert Argon or Nitrogen atmosphere into a screw cap vial.

4. For liquids (lyophilized reagents suspended in solvent), use a glass syringe for the measuring of these reagents. Your reagent must be kept under positive pressure with an Argon atmosphere.


6. Clean up work area and lab equipment.

7. Remove PPE and wash hands.

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**WASTE DISPOSAL**

Waste can be disposed of in the Inorganic Waste Container.

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**TRAINING REQUIREMENTS**

**General Training (check all that apply):**

- General Safety & Emergency Preparedness
- Chemical Safety for Laboratories
- Radiation Safety
- Biosafety training
- Other: 

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**Location Where Records Maintained:** Stockroom

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For assistance with this form contact NIU Environmental Health and Safety, 815-753-0404.
**Laboratory-specific training (check all that apply):**

- ☐ Review of SDS for other chemicals involved in process/experiment
- ☑ Review of this SOP
- ☐ Other: __________________________

| Location Where Records Maintained: | Stock room |

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**Prior Approvals**

Prior approvals are required by the following University Committees:

- Radiation Safety Committee: Radioactive material.
- Radiation Safety Committee: X-Ray machines
- Laser safety: Laser producing equipment Class 3b or above.
- IACUC: Animal use in research
  - [http://www.egr.niu.edu/orc/animal_research/index.shtml](http://www.egr.niu.edu/orc/animal_research/index.shtml)
- IBC: Recombinant DNA, potential pathogens, human tissue/body fluids
  - [http://www.egr.niu.edu/orc/biosafety/niupolicy.shtml](http://www.egr.niu.edu/orc/biosafety/niupolicy.shtml)